

CLAIMS:

1. A display device comprising a cathode ray tube (1), the cathode ray tube having an electron gun (7) comprising:
 - a pre-focusing lens portion, for generating a pre-focusing lens field (22), and
 - a main lens portion, for generating a main lens field (23),
- 5 characterized in that the electron gun (7) further comprises an additional grid (10), being positioned in proximity with said main lens portion, whereby a potential V_{gx} is arranged to be applied to said additional grid (10), for generating, together with one of the potentials V_{foc} or V_{dyn} , an additional lens field (11) in proximity with said main lens field, whereby, in operation, the main lens field and the additional lens field is arranged to cooperate to form

10 an effective main lens field.
2. A display device as in claim 1, wherein said pre-focusing lens portion comprises a first electrode (G1) and a second electrode (G2), whereby the potential V_{gx} applied to said additional grid is equal to the potential V_{g2} applied to said second electrode

15 (G2), the potential V_{g2} being in the range of 350-1500 V, preferably about 700 V.
3. A display device as in claim 1, wherein said main lens portion comprises a distributed composed field lens, whereby the potential V_{gx} applied to said additional grid (10) is equal to a potential V_{gi} applied to an intermediate grid of the distributed composed

20 field lens, wherein V_{gi} is within the range of 40% to 60% of the potential V_a .
4. A display device as in any one of the claims 1-3, wherein the additional lens field generated by the additional grid (10) is arranged to be an astigmatic lens field.
- 25 5. A display device as in any one of the claims 1-4, wherein said electron gun (7) further comprises a dynamic astigmatism and focus portion (DAF), and said additional grid (10) is arranged between the dynamic astigmatism and focus portion and the main lens portion.

6. A display device as in any one of the claims 1-4, wherein said electron gun (7) further comprises a dynamic astigmatism and focus portion (DAF), and said additional grid (10) is arranged between the dynamic astigmatism and focus portion and the pre-focussing lens portion, in close proximity with the dynamic astigmatism and focus portion.

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7. A display device as in any one of the preceding claims, wherein the electron gun (7) further comprises a dynamic beam forming section (DBF).

8. A cathode ray tube device for use in a display device as claimed in any one of the preceding claims.

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9. An electron gun for use in a device according to any one of the preceding claims.
